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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,663	07/22/2003	George Anthony Higgins	CES-59	1819

7590 07/13/2005

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EXAMINER
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PAIK, SANG YEOP

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/626,663

Applicant(s)

HIGGINS ET AL

Examiner

Sang Y. Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 6-16, 19, 20 and 23-29 is/are allowed.  
 6) ☒ Claim(s) 1-5, 17, 18, 21 and 22 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_  
 4) ☐ Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 7, 8 and 13 are objected to because of the following informalities: Claims 7, 8 and 13 are objected to because of the following informalities: There seems to be typo when deleting the dependency in these claims, i.e., the double slashes were used to delete the previous dependencies. Claims 7, 8 and 13 are treated to depend on claim 27 for the purposes of examining. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-5, 17, 18, 21 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear what area would constitute the region of connection, i.e., how far does the region of connection extend?

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Gross et al (US 5,393,958).

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Gross shows a radiant electric heater having a circumference having a first and second heating zones, terminal means for connecting the first element portion and the second element portion that are formed integrally from a continuous heating element with the conjoined ends are connected to a first electrical connector of the terminal means with the other free ends of the first and second element portions connected to the second and third electrical connector of the terminal means. It is also shown that the heating elements are extended circumferentially of the heater in the region of the connection.

6. Claims 1-4 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Scott (US 5,977,523).

Scott shows the radiant electric heater claimed including a first and second heating zones with the respective first and second heating elements that include a conjoined ends forming a continuous heating element that is connected to a first electrical connector of the terminal means and the other free ends of the heating elements connected to the second and third connectors wherein the third connector is positioned intermediate to the first and second electrical connectors. Scott shows the heating elements that are made of ribbons inserted in a base of electrical insulating material, and further shows that the heating elements are in the form of a double spiral where in a first strand extends from a peripheral region to a central region of the heater and a second strand extends from a central region to a peripheral region of the heater.

7. Claims 1, 2, 4 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Higgins (US 5,892,206).

Higgins shows the heater claimed including a first and second heating zones with the respective first and second heating elements that include a conjoined ends connected to a first

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electrical connector of the terminal means and the other free ends of the heating elements connected to the second and third connectors wherein the third connector is positioned intermediate to the first and second electrical connectors. Higgins also shows the heating elements that are made of ribbons inserted in a base of electrical insulating material.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scott (US 5,977,523) in view of Goessler et al (US 4,511,789) or Challet (US 2,330,867).

Scott shows the heater claimed except having two second heating element portions connected in parallel.

Goessler show a heater having a first inner heater (13) and two outer heaters (14, 15). Challet also shows a heater having a multiple heaters in the respective multiple heating zones. In view of Goessler or Challet, it would have been obvious to one of ordinary skill in the art to provide two heating elements or more heating elements in the same heating zones to provide multiple heating elements so that the respective heating zones can be heated if when one of the heaters fails or to control the heating intensity in the respective heating zones.

***Allowable Subject Matter***

10. Claims 6-16, 19, 20 and 23-29 allowed.

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11. Claims 5, 18 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

12. Applicant's arguments filed 4/25/05 have been fully considered but they are not persuasive.

The applicant argues Scott and Higgins fail to show the heating element portions that extend generally circumferentially of the heater in the region of connection. This argument is not deemed persuasive. First, there is no specific structure that defines the claimed region of connection that there would be exclusive to define over the prior art, and since the region of connection can be any area near or in vicinity where the electrical connections are made, it is clearly shown that the heating element portions extend circumferentially in the vicinity area of the connections. As the applicant points out, a sharp connection can be had in the prior art but that can be a part of the heating element portions that extend circumferentially in the region of the connection.

With respect to the recitation of the integrally formed from a continuous heating element, the applicant argues that since Scott teaches the heating elements that need not both be of the same form and thus would not have formed from the continuous heating element. However, Scott clearly teaches that the heating elements have the same form of the corrugated ribbon and this shows that the heating elements that have the same form are integrally formed from a continuous heating element which has the same corrugated ribbon.

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13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y. Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (9:00-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Paik

Sang Y Paik  
Primary Examiner  
Art Unit 3742

syp